RUSSELL G. CLOUGH 837 Waverley Street Palo Alto, CA 94301 rclough@stanford.edu 650-814-0266

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### **EDUCATION AND PROFESSIONAL**

BSCE 1964 and MSCE 1965 from Stanford University; Contractor's License in Calif., Oregon, and Utah; Registered Civil Engineer in Calif., W.Va., and Hawaii; Registered Geotechnical and Safety Engr. in Calif.; Certified Blaster, Tunnel Safety Rep, MSHA Rescue Team Leader, AGC Negotiating Committee, UTRC, ASCE life member.

### WORK EXPERIENCE

Stanford University <a href="http://cem.stanford.edu/faculty/index.html">http://cem.stanford.edu/faculty/index.html</a> <a href="January 1994">January 1994 to Present</a>
Consulting professor in Civil Engineering. Teach classes in engineering design, estimating, dispute resolution, and construction cases. During this period have continued consulting work, arbitration, and served on more than 40 Dispute Review Boards. Consultant and lecturer to the Chinese Ministry of Water Resources in 1997-1998.

# Russell G. Clough Co.

### August 1979 to May 1994

Owner of a contracting, consulting, and engineering company. Designed and built wine caves & civil tunnels. Contracted estimating, management, and equipment for Torno as a VP-Operations on a tunnel and two dam contracts, a Project Manager for Obayashi on two waste water projects, and a Manager for various contractors on other projects. These jobs included hydro re-fits, soft ground tunnels using EPB machines, Lovat TBM's, shields, hard rock tunnels using explosives and roadheader methods, open cut excavations, shoring, dewatering, concrete structures, bridges, buildings, etc.

#### Gordon H. Ball, Inc.

# June 1968 to July 1979

Laborer, field engineer, project engineer, and project manager on eight projects including dams, highways, buildings, structures, tunnels, and shafts. Four of these projects were dam contracts for the Corps or Bureau including underground work, foundation excavations, dirt and rock embankments, and concrete structures. Worked in the home office estimating heavy construction projects for several years.

# Various Contractors & Engineering Companies

# June 1961 to June 1968

Worked on nine tunnel, dam, and structures projects as a laborer, foreman, and engineer including a number of difficult dams and tunnels in the Coast Ranges of California which required breast boarding and various methods to handle hazardous and gassy conditions. Worked for a consulting engineering company for two years.

# U.S. Marine Corps, U.S. Forest Service

# June 1959 to September 1960

Six months active and then reserve duty in the airborne infantry. Surveying forest roads.

#### GENERAL EXPERIENCE

Have visited over 400 projects in Japan, China, Korea, Canada, Italy, England, Germany, Belgium, Sweden, Norway, Austria, Switzerland, Australia, Guatemala, Mexico, and the U.S. Director of several organizations.

#### PERSONAL HISTORY

Birthdate: December 25, 1941. Height and weight: 6 feet, 170 pounds. Married with one grown son. Father was a mining and construction engineer.

# Russell Clough DRB and Mediation List

|    |                                     |                                       |                        | Contract \$ |       |       | Appt. |                      |   |
|----|-------------------------------------|---------------------------------------|------------------------|-------------|-------|-------|-------|----------------------|---|
| _# | Project                             | Owner                                 | Contractor             | (Million)   | Owner | Chair | Contr |                      | Type of Work  |
| 1  | First Ave<br>Bridge                 | Seattle<br>Metro                      | Coluccio               | 8           |       | X     |       | 4/95<br>to<br>8/96   | feet of tunnel using pipe<br>jacking and Iseki TBM for  |
| 2  | Scioto<br>Wastewater<br>Interceptor | City of<br>Columbus,<br>Ohio          | McNally                | 19          |       |       | X     | 10/95<br>to<br>10/98 | Several shafts, 7,000 feet of TBM tunnel for sewer.   |
| 3  | Alki<br>Wastewater<br>Transfer      | King County<br>Seattle                | McNally                | 25          |       |       | X     | 11/95<br>to<br>6/96  | 10,000 feet of EPB tunnel with<br>two shafts. Very soft ground<br>and high water table.                       |
| 4  | Universal<br>City Station           | Los Angeles<br>Transit<br>Authority   | Tutor-<br>Saliba       | 80          |       | X     |       | 6/96<br>to<br>6/00   | Rapid Transit Station. Deep<br>exc-soldier pile/tie backs,<br>concrete structure, finish mech-<br>elect work. |
| 5  | Portland<br>Light Rail              | Tri-County                            | Kajima                 | 35          | X     |       |       | 8/96<br>to<br>5/97   | Light rail rapid transit system.  |
| 6  | Congress<br>Heights<br>Subway       | Washington<br>DC Transit<br>Authority | Kiewit-<br>Kenny       | 60          | X     |       |       | 4/97<br>to<br>3/99   | Washington, DC rapid transit<br>system. Soft ground twin bore<br>TBM tunnel and associated<br>work.           |
| 7  | Contract 4<br>Wastewater<br>System  | Wayne<br>County<br>Detroit            | Ric-Man<br>Const, Inc. | 16          |       | X     |       | 3/98<br>to<br>12/01  | Three miles of 10 foot diameter<br>TBM tunnel, several shafts for<br>municipal wasterwater system             |
| 8  | Orinda<br>Wastewater<br>System      | Contra<br>Costa<br>County             | Mountain<br>Cascade    | 9           |       |       | X     | 3/98<br>to<br>4/99   | Two miles of 3 to 4 foot diameter microtunnel, numerous shafts, open cut, etc.                                |
| 9  | Highway 17<br>Slide Repair          | Caltrans San<br>Jose                  | Granite                | 3           |       | X     |       | 11/98<br>to<br>9/99  | Excavation, soil nail wall, and slide repair on state highway 17.   |

| #  | Project                          | Owner                                 | Contractor             | Contract \$ |   | Chair | Appt.<br>by<br>Contr | Dates               | Type of Work  |
|----|----------------------------------|---------------------------------------|------------------------|-------------|---|-------|----------------------|---------------------|---|
| 13 | I 80                             | Caltrans<br>Davis                     | RM Harris              | 13          |   |       | Х                    | 6/99<br>to<br>10/01 | Interstate 80 bridge and overpass   |
| 14 | Rinconada<br>Treatment<br>Plant  | Santa Clara<br>Water Dist.            | Pacific<br>Mechanical  | 7           |   | X     |                      | 12/99<br>to<br>7/03 | Water treatment plant   |
| 15 | Penitencia<br>Treatment<br>Plant | Santa Clara<br>Water Dist.            | Pacific<br>Mechanical  | 17          |   | X     |                      | 4/00<br>to<br>7/03  | Water treatment plant   |
| 16 | Universal<br>City Bridge         | LA Transit<br>Authority &<br>Caltrans | Brutoco,<br>Inc.       | 30          | X |       |                      | 6/00<br>to<br>6/02  | Bridge over Hollywood<br>Freeway (101) and restoration<br>work                    |
| 17 | Denny Way<br>CSO<br>Project      | King County<br>Seattle                | Coluccio<br>Const. Co. | 30          |   | X     |                      | 2/01<br>to<br>9/02  | 15 ft. diameter EPB tunnel,<br>several shafts, and smaller<br>tunnels             |
| 18 | Highway<br>108 Bypass            | Caltrans<br>Sonora                    | Goodfellow<br>Const.   | 41          |   | X     |                      | 1/02<br>to<br>11/05 | Calif. State freeway bypass an bridges  |
| 19 | Olivenhain<br>Dam                | San Diego<br>County                   | Kiewit                 | 150         |   | x     |                      | 7/02<br>to<br>12/03 | Roller Compacted Concrete<br>Dam and ancillary works                              |
| 20 | South Lake<br>Union Pipe         | King County<br>Seattle                | Coluccio<br>Const. Co. | 11          |   | X     |                      | 9/02<br>to<br>5/04  | Combined sewer outflow<br>pipelines and structures -<br>microtunneling and EPB    |
| 21 | Reno Rail<br>Corridor            | City of Reno                          | Granite -<br>Parsons   | 180         |   |       | Х                    | 6/03<br>to<br>6/06  | Design Build Project to depres<br>railroad in subgrade structures<br>through Reno |
| 22 | San Jose<br>Flood<br>Channel     | Santa Clara<br>Water Dist.            | RGW                    | 11          |   | X     |                      | 8/03<br>to<br>7/06  | Flood control channel excavation and structurres                                  |

| 25 | Hwy 101/85<br>Interchange         | Caltirans<br>San Jose              | Pavex                                 | 20  |   |   | X | 8/04<br>to<br>3/05  | Widen freeway, bridges, etc.   |
|----|-----------------------------------|------------------------------------|---------------------------------------|-----|---|---|---|---------------------|--|
| 26 | New<br>Natomas<br>Pump<br>Station | Sacramento<br>Sanitary<br>District | Kiewit                                | 100 | X |   |   | 10/04<br>to<br>8/06 | Undergorund pump station and surface facilities.                                 |
| 27 | Calif. State<br>Highway 22        | Orange<br>County<br>Transit        | Granite                               | 460 |   |   | X | 4/05<br>to<br>4/08  | Design build freeway in<br>Southern California                                   |
| 28 | Bradshaw<br>Waste<br>Water Line   | Sacramento<br>Sanitary<br>District | Affholder                             | 21  | X |   |   | 4/05<br>to<br>11/05 | Wastewater EPB tunnel and facilities   |
| 29 | Laguna<br>Interceptor             | Sacramento<br>Sanitary<br>District | Teichert                              | 15  | X |   |   | 5/05<br>to<br>10/07 | Wastewater pipeline, EPB<br>tunnel, and facilities in Elk<br>Grove               |
| 30 | Highway 87<br>Widening            | Caltlrans<br>San Jose<br>Hwy 87    | RGW                                   | 44  |   | X |   | 6/05<br>to<br>5/07  | Widen freeway, bridges, etc.   |
| 31 | Los<br>Angeles<br>Light Rail      | MTA                                | Washington<br>, Shimmick,<br>Obayashi | 898 | X |   |   | 9/05<br>to<br>9/08  | At grade, stations, and<br>underground design build rapid<br>transit. EPB tunnel |
| 32 | Hwy 280<br>Widening -<br>Upgrade  | Caltlrans<br>San Jose<br>Hwy 280   | RGW                                   | 16  |   | X |   | 8/06<br>to<br>10/07 | Widen freeway, bridges, etc.   |
| 33 | Hetch<br>Hetchy<br>Upgrade        | San<br>Francisco<br>PUC            | Ranger<br>Pipeline                    | 20  | X |   |   | 11/06<br>to<br>7/07 | Water structures and upgrades across Hayward fault                               |
| 34 | Ellis Ave<br>Sewer                | Orange<br>County San<br>District   | Barnard<br>Soletanch                  | 32  | X |   |   | 11/06<br>to<br>3/08 | Wastewater structures and EPB tunnel   |
| 35 | Brightwater<br>Central            | King<br>CountyWA                   | Parson<br>Frontier                    | 220 |   | X |   | 4/07<br>to          | Design Build Wastewater<br>structures and Slurry TBM<br>tunnel under high head.  |

| 38 | Hwy 152<br>Truck Lane<br>Upgrade | Caltlrans<br>Hollister<br>Hwy 152      | RGW                            | 11  |   | X | 9/07<br>to<br>6/08 | Soil nail and retaining walls, truck lanes, etc.                                |
|----|----------------------------------|--|--------------------------------|-----|---|---|--------------------|---|
| 39 | Lenihan<br>Dam                   | Santa Clara<br>Water Dist.             | Flatiron                       | 35  |   | X | 11/07<br>to        | Upgrade diversion works for dam including 2,000 foot tunnel.                    |
| 40 | Brightwater<br>West              | King<br>CountyWA                       | JayDee,<br>Coluccio,<br>Taisei | 250 |   | X | 12/07<br>to        | Design Build Wastewater<br>structures and Slurry TBM<br>tunnel under high head. |
| 41 | Alemany<br>Pump<br>Station       | San<br>Francisco<br>PUC                | Monterrey<br>Mechanical        | 30  |   | x | 3/08<br>to         | Cleanwater Pump Station   |
| 42 | Bujagali<br>Dam                  | World Bank,<br>Uganda,<br>Sithe Global | Salini                         | 400 | X |   | 4/08<br>to         | 250 MW hydroelectric project,<br>rock & concrete dam on Nile<br>River in Uganda |
| 43 | Seven Trees<br>Center<br>Library | City of San<br>Jose                    | Gonsalves<br>& Stronck<br>Co.  | 26  | Х |   | 6/08<br>to         | City center and library building  |
| 44 | Harry Tracy<br>Water Plant       | San<br>Francisco<br>PUC                | NTK Const.<br>Inc.             | 14  |   | X | 9/08<br>to         | 144 MGD Water Trt Plt<br>Upgrade  |
| 45 | Channel<br>Pump<br>Station       | San<br>Francisco<br>PUC                | Monterrey<br>Mechanical        | 15  |   | X | 11/08<br>to        | Pump, odor control, and injection system improvements, etc.                     |

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| \$4,237   | 13    | 22    | 10    |
|-----------|-------|-------|-------|
| Total \$  | Appt. |       | Appt. |
| Contract  | by    | Chair | by    |
| (Million) | Owner |       | Contr |

# Arbitrations and Mediations - Russell Clough

|         |         |         | 6/65        | Negotiations as engineer or  |
|---------|---------|---------|-------------|------------------------------|
| Various | Various | Various | to<br>12/94 | contractor with unions, etc. |

South Interceptor Sewer Seattle Seattle Tri-State Constructio 28

12/02 Mediator for \$3MM dispute to regarding changed conditions, 1/03 etc.